

Suggested Strategy for Resolving UIC Issues

DOC/DOGGR envisions a three-part strategy to appropriately triage and resolve issues facing the Underground Injection Control (UIC) Program. Note, however, that this strategy includes consideration of matters related to cyclic steam injection, but not full resolution, as we expect those will need to be subject to a separate rulemaking effort, standing alone for that portion of the UIC Program.

1. Review of Already Approved and/or Existing Wells (Timeline: starting now, continuing approx. 3 months)

As you know, we are currently reviewing records to ensure that existing approved UIC wells, both those that are associated with an injection project and those that are not, were approved in compliance with UIC program administered by DOGGR under federal Safe Drinking Water Act primacy granted by US EPA. There are categories of existing UIC wells that require examination and they can be triaged into several categories:

- WD wells injecting into non-exempt aquifers (approximately 11 identified and subjected to orders dated July 2, 2014)
- WD wells injecting into aquifers that may (or may not) be exempted under the original Memorandum of Agreement with USEPA (approximately 95 wells). Resolving uncertainty about aquifer exemption status for these wells, as well as identifying whether any of these wells pose threats to higher-quality groundwater, is necessary to determining what action to take.
- WD wells that are not specifically identified as part of a UIC project (approx. 127 wells). These are not specifically identified as EOR wells, are not part of a project and the native water quality in the formation into which injection occurs is not readily known and could be less than 3,000 ppm total dissolved solids (TDS).
- WD/EOR wells not in the above categories that could be EOR or WD and are located outside the productive limits of an oil field (and are thus also outside the bounds of the surface representation of exempt aquifers). (approx. 1,800 wells)
- WD/EOR injection wells that have been permitted that appear to be within the surface representation of exempt aquifers (approx. 32,000 wells). Given their location and type, DOGGR anticipates that about 31,000 of these wells will quickly be shown to have no threat to groundwater of any appreciable quality; that is, many will be EOR or cyclic steam wells into hydrocarbon zones). However, review of all wells is necessary to ensure that they are not injecting into non-exempt aquifers.

The range of possible actions that could be taken with respect to the wells reviewed can be seen in the attached prioritization / tally sheet, with the least change option being either no change in operations or that we need to get the aquifer exemption completed and in to the USEPA ASAP. Injection wells taking place into a non-exempt aquifer with native groundwater quality less than 3,000 ppm TDS and no hydrocarbon production, will be referred as found to the State Water Board for further analysis and public health considerations while DOGGR completes a more complete geologic and well record review. Such wells typically will be ordered to stop injection.

2. Revision of Current Approval Practices (Timeline: Immediate.)

Any current permitting practice that could result in the approval of injection into a nonexempt zone needs to cease immediately. We are already adjusting approval practices to ensure that improper approvals do not occur, and requiring diversion of permit and project applications for injection to headquarters to assure a consistent approach.

Operators will have significant concern if new injectors are not permitted. There are two options for them under the proposed revision – (1) adjust their proposal to request injection into an already-exempt aquifer or (2) propose to exempt the target aquifer by applying to USEPA for a new or adjusted injection.

Providing guidance to the operators on how to obtain a new exemption will be key. We will work promptly and energetically with the US EPA toward articulating the basic steps of the exemption application process.

(Note: Going forward, there will be a strong imperative to make these intentions clear, probably through a Notice to Operators or other prompt notification device. While we should make clear to industry that we are closely scrutinizing these injection well and project applications, this change need not be part of any communications strategy, simply because it is really nothing more than us simply doing our job.)

3. Review / Revision of UIC Program Rules (Timeline: 12-18 months, including rulemaking)

In response to the USEPA-commissioned 2011 audit of the Department's UIC Program, the Department committed to a review and revision of the UIC program, as necessary. The UIC Primacy Agreement is now 30 years old and there are many changes in industry practices and in technology applications that merit inclusion in new UIC regulations, and possibly a new, or at least clarified, Memorandum of Agreement. This would include further clarification of which aquifers are exempt and why. The review of existing UIC wells reveals some key misunderstandings both among regulators and among industry about the requirements of the program and those should be clarified to improve program delivery.

This aspect of the UIC review will start with the findings of the 2011 audit. The review will continue, looking into review and permitting processes to identify areas for improvement. And the actual rules of the UIC Program will be scrutinized to determine if there are needed improvements or clarifications. This review will examine some of the cyclic steam issues, but the changes in terms of regulatory construct should be placed in a different rule-making track. There is already work on this by the California Conservation Committee of Oil and Gas Producers (CCCOGP), a group of industry technicians commissioned by statute to advise DOGGR. Though that group's initial thoughts are just beginning to form, it is clear from a review of the practice of cyclic steaming of wells that the regulations for an EOR-type, injectors-and-producers type recovery system could be quite different than those to constrain the risks associated with cyclic steam production.

In addition, this review of the UIC Program will need to consider how California Environmental Quality Act compliance is achieved in the UIC project approval process. This is a subset of the larger question of how CEQA compliance is achieved for drilling projects generally. However, UIC does carry the potential for additional environmental impacts beyond the fundamental drilling and completion of a well.

DOC's Legal Office is putting together a proposal with alternatives in this regard.

